UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,854	03/24/2005	Peter William McOwan	108347-00030	2806

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ARENT FOX LLP
1050 CONNECTICUT AVENUE, N.W.
SUITE 400
WASHINGTON, DC 20036

EXAMINER
PARK, EDWARD

ART UNIT	PAPER NUMBER
2624	

NOTIFICATION DATE	DELIVERY MODE
09/27/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/500,854	MCOWAN ET AL.
	Examiner	**Art Unit**	
	Edward Park	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-16* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-16* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *16 July 2004* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☒ All b) ☐ Some * c) ☐ None of:

         1. ☐ Certified copies of the priority documents have been received.

         2. ☐ Certified copies of the priority documents have been received in Application No. _____.

         3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *7/16/04*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   **Claims 1-7, 15, 16** are rejected under 35 U.S.C. 102(b) as being anticipated by

Plamondon (US 5,101,437).

       Regarding **claim 1**, Plamondon teaches an authentication system for authenticating a

user's signature as electronically inputted into the system by a manual input device providing an

output indicative of its location with respect to time when manipulated by the user, the system

comprising:

(a) extraction means for extracting angle and distance data relating different parts of the user's signature inputted into the system by the manual input device (Plamondon: col. 12, lines 1-9; col. 1, lines 44-67);

(b) registration means for setting up a reference data file compiled from angle and distance data relating to a plurality of samples of the user's signature inputted into the system by the user by means of the manual input device during a registration phase (Plamondon: col. 6, lines 63-68);

(c) comparison means for comparing the angle and distance data extracted by the extraction means from the user's signature inputted into the system during an authentication phase to reference angle and distance data held in the reference data file, according to defined verification criteria (Plamondon: col. 12, lines 64-68; col. 13, lines 1-15); and

(d) verification means for providing an output indicative of an appropriate match between the inputted signature to be authenticated and the reference data in dependence on the result of the comparison, thereby providing verification of the user's signature (Plamondon: figures 1a,1b).

Regarding **claim 2**, Plamondon teaches to extract data relating to a plurality of different points of the user's signature including data relating some of said points to other points in the user's signature as inputted into the system by the manual input device (Plamondon: figures 8-11; col. 7, line 49 – col. 8, line 55).

Regarding **claim 3**, Plamondon teaches to extract data relating to a plurality of different points of the user's signature including data relating each of a number of said points to an immediately preceding point in the user's signature as inputted into the system by the manual input device (Plamondon: figures 8-11; col. 7, line 49 – col. 8, line 55).

Regarding **claim 4**, Plamondon teaches to extract data relating to a plurality of different points of the user's signature including data relating a last point to a first point in the user's signature as inputted into the system by the manual input device (Plamondon: figures 8-11; col. 7, line 49 – col. 8, line 55).

Regarding **claim 5**, Plamondon teaches an angle extract means for extracting angle data concerning the relative angular positions of a plurality of points of the user's signature (Plamondon: col. 7, line 49 – col. 8, line 55).

Regarding **claim 6**, Plamondon teaches a distance extract means for extracting distance data concerning the relative distances apart of a plurality of points of the user's signature (Plamondon: figures 8-11; col. 7, line 49 – col. 8, line 55).

Regarding **claim 7**, Plamondon teaches timing extract means for extracting timing data indicative of the relative times between execution of different parts of the user's signature, and the comparison means is adapted to compare the extracted timing data with reference timing data in the reference data file (Plamondon: figures 8-11; col. 7, line 49 – col. 8, line 55).

Regarding **claim 15**, Plamondon teaches refining the verification criteria by which a match is to be judged on the basis of angle and distance data relating to a plurality of samples of the user's signature inputted into the system by the user during the registration phase and generated false samples (Plamondon: col. 20, line 59 – col. 21, lines 67).

Regarding **claim 16**, Plamondon teaches a reject output indicative of non-matching of one or more verification criteria only after completion of all the verification procedures (Plamondon: figure 21; col. 21, lines 28-67).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   **Claims 8-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over by

Plamondon (US 5,101,437) in view of Young et al (US 4,805,222).

Regarding **claims 8-11**, Plamondon discloses all elements as mentioned above in claim 1.

Plamondon does not teach a password verification means that is provided for verifying input of a

required password, as determined by reference password means, by the user using a keyboard

input device; timing verification means that is provided for verifying input of the password by

the user with the required timing, as determined by reference timing means, using the keyboard

input device; and verifying the hold times for which the relevant keys of the keyboard input

device are depressed during input of the password, and means for verifying the latency times

between the release of one key and the depression of the following key during use of the

keyboard input device to enter the password.

Young teaches a password verification means that is provided for verifying input of a

required password, as determined by reference password means, by the user using a keyboard

input device (Young: col. 2, lines 40-52); timing verification means that is provided for verifying

input of the password by the user with the required timing, as determined by reference timing

means, using the keyboard input device (Young: col. 6, lines 50-63); verifying the hold times for

which the relevant keys of the keyboard input device are depressed during input of the password, and means for verifying the latency times between the release of one key and the depression of the following key during use of the keyboard input device to enter the password (Young : col. 7, lines 6-21); and user name input means is provided for receiving a user name inputted into the system to identify the identity of the user for the purposes of selection of the required reference data file for that user (Young: figure 10).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Plamondon reference to utilize timing password verification and username as suggested by Young, to increase the dynamics and functionality of the authentication system with the addition another biometric feature.

6.   **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over by Plamondon (US 5,101,437) in view of Moussa et al (US 5,680,470).

Regarding **claim 12**, Plamondon discloses all elements as mentioned above in claim 1. Plamondon does not teach at least one neural network for determining the verification criteria by which a match is to be judged.

Moussa teaches at least one neural network for determining the verification criteria by which a match is to be judged (Moussa: col. 1, lines 43-59).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Plamondon reference to utilize a neural network as suggested by Moussa, to increase the reliability and allow the "[adjustment of] sensitivity" (Moussa: col. 1, lines 43-59) of the verification system.

7. **Claims 13, 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over by

Plamondon (US 5,101,437) in view of Collot et al (US 5,042,073).

Regarding **claims 13 and 14** , Plamondon discloses all elements as mentioned above in

claim 1. Plamondon does not teach different features of the user's signature selected according to

the fitness of such features to discriminate the user's signature for the purposes of verification

and determined by a fitness function relating the relative fitness of the features to their form and

number; and a optimisation algorithm.

Collot teaches different features of the user's signature selected according to the fitness of

such features to discriminate the user's signature for the purposes of verification and determined

by a fitness function relating the relative fitness of the features to their form and number (Collot:

col. 1, lines 67-68 – col. 2, lines 1-11); and a optimisation algorithm (Collot: col. 1, lines 67-68 –

col. 2, lines 1-11).

It would have been obvious at the time the invention was made to one of ordinary skill in

the art to modify the Plamondon reference to utilize a fitness/optimisation function as suggested

by Collot, to increase the reliability of the system by "minimiz[ing] decision errors" (Collot: col.

2, lines 5-11).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Edward Park whose telephone number is (571) 270-1576. The

examiner can normally be reached on M-F 10:30 - 20:00, (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Edward Park
Examiner
Art Unit 2624

/Edward Park/

BRIAN WERNER
SUP~ ~ ~ ~ EXAMINER
BRIAN WERNER
SUPERVISORY PATENT EXAMINER